

RIVERSIDE



CALIFORNIA

PUBLIC WORKS DEPARTMENT

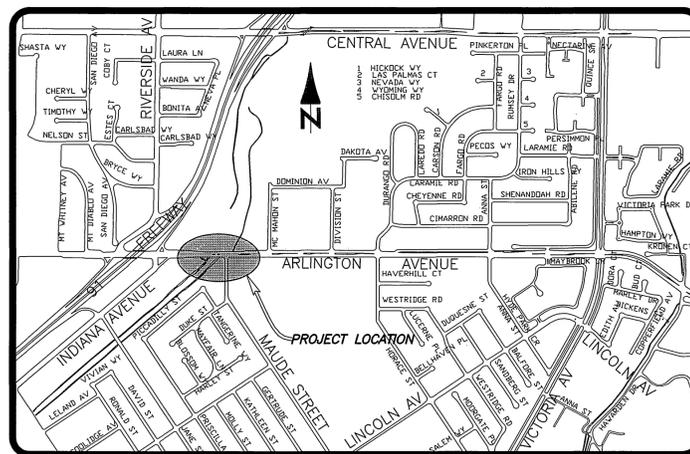
ARLINGTON AVENUE SEWER REALIGNMENT

BETWEEN INDIANA AVENUE AND McMAHON STREET

FEDERAL AID PROJECT NUMBER CML-5058(041)

GENERAL CONSTRUCTION NOTES

- EXISTING UTILITIES SHOWN ON THE PLAN, ARE PLOTTED FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF UTILITIES PRIOR TO CONSTRUCTION.
- PRIME CONTRACTORS BIDDING THIS WORK SHALL HAVE CLASS A, C-34, OR C-42 LICENSE.
- ALL ELEVATIONS SHOWN ON THE PLANS SHALL BE STAKED IN THE FIELD.
- BACKFILLING OF TRENCH AND PAVEMENT REPLACEMENT SHALL BE DONE PER DETAIL A ON THIS SHEET.
- PIPE BEDDING SHALL BE PER DETAIL B ON THIS SHEET.
- RIGHTS OF ENTRY FOR ALL PROPERTIES ON ARLINGTON AVENUE BETWEEN INDIANA AVENUE AND McMAHON STREET HAVE BEEN OBTAINED BY THE CITY OF RIVERSIDE.
- CONTRACTOR SHALL USE A PROTECTIVE SYSTEM ADEQUATE TO PROTECT WORKERS, JOBSITE AND ADJACENT FACILITIES. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE ENGINEER APPROVED TRENCH PROTECTION PLANS PRIOR TO CONDUCT INSTALLATION.
- ALL PIPE BEDDING SHALL BE PER DETAIL 'B' ON THIS SHEET, UNLESS NOTED ON PLAN.
- TRENCH BACKFILL AND PAVEMENT RESURFACING DETAILS SHALL BE PER DETAIL 'A' ON THIS SHEET, UNLESS NOTED ON THE PLAN.
- JOINTS FOR VITRIFIED CLAY PIPE SHALL BE COMPRESSION JOINTS.



PROJECT LOCATION PLAN

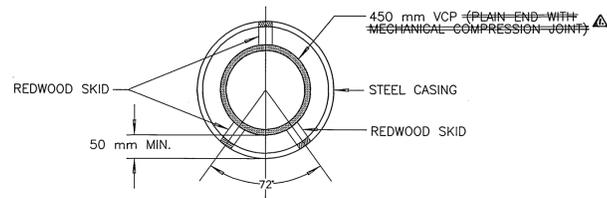
(NOT TO SCALE)



NOTES FOR DETAIL B

- ALL DIMENSIONS ARE IN MILLIMETERS.
- GRANULAR MATERIAL SHALL BE SAND, GRAVEL, DISINTEGRATED GRANITE, CRUSHED SLAG, CRUSHED OR NATIVE SOIL WITH A SAND EQUIVALENT OF NOT LESS THAN 30.
- WHERE GROUND WATER IS ENCOUNTERED IN THE TRENCH, THE CONTRACTOR SHALL AT THE DIRECTION OF THE CITY ENGINEER, EXCAVATE TO A DEPTH OF 150 mm BELOW THE PROPOSED PIPE AND PLACE A BEDDING OF 20 mm CRUSHED ROCK OR CRUSHED SLAG. IF THE GROUND WATER IS MORE THAN 75 mm ABOVE FLOW LINE OF PIPE, THE CONTRACTOR SHALL CONSTRUCT CONCRETE BARRIERS 910 mm WIDE, IN 7.6 m INTERVALS, UNDER THE PIPE TO PREVENT THE FLOW OF WATER THROUGH THE CRUSHED BEDDING MATERIAL.
- CONCRETE SHALL CONFORM TO SECTION 201-1.1.2 OF THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- TRENCH WALLS SHALL BE VERTICAL WITHIN THE BEDDING AREA, UNLESS IMPROVED BEDDING, AS APPROVED BY THE CITY ENGINEER, IS USED. MAX. TOP TRENCH WIDTH SHALL NOT EXCEED 2440 mm.

PIPE	COVER	W		TRENCH WIDTH (T)	
		MAX	MIN	MAX	MIN
VCP 305 & UNDER	>2440	200	150	D+400	D+300
VCP 380 & OVER	>2440	305	150	D+610	D+300
OTHERS	>2440	255	150	D+510	D+300
ALL	<2440	305	150	D+610	D+300



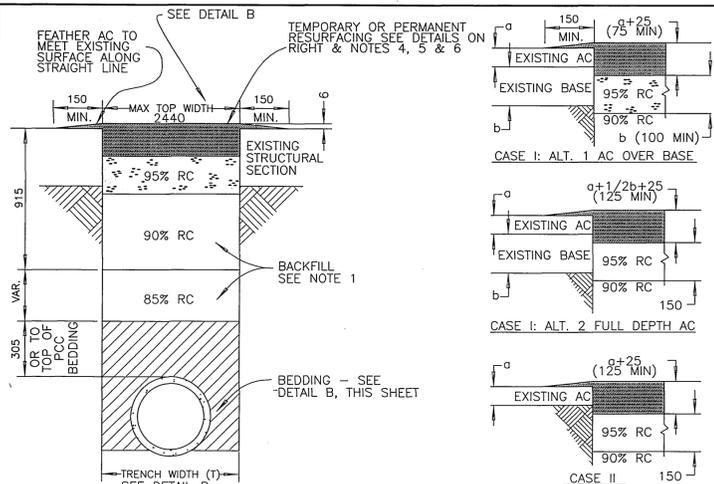
DETAIL C - STEEL CASING AND SKIDS DETAIL

NOTES FOR DETAIL C

- ALL DIMENSIONS ARE IN MILLIMETERS.
- SKIDS (3 PER PIPE SECTION) SHALL BE REDWOOD, 1.2 m LONG, 100 mm WIDE AND OF SUFFICIENT TO PROVIDE A MINIMUM 50 mm CLEARANCE AT COUPLINGS. ALL SKIDS SHALL BE OF EQUAL DIMENSIONS AND POSITIONED AT THE MIDPOINT OF EACH PIPE LENGTH.

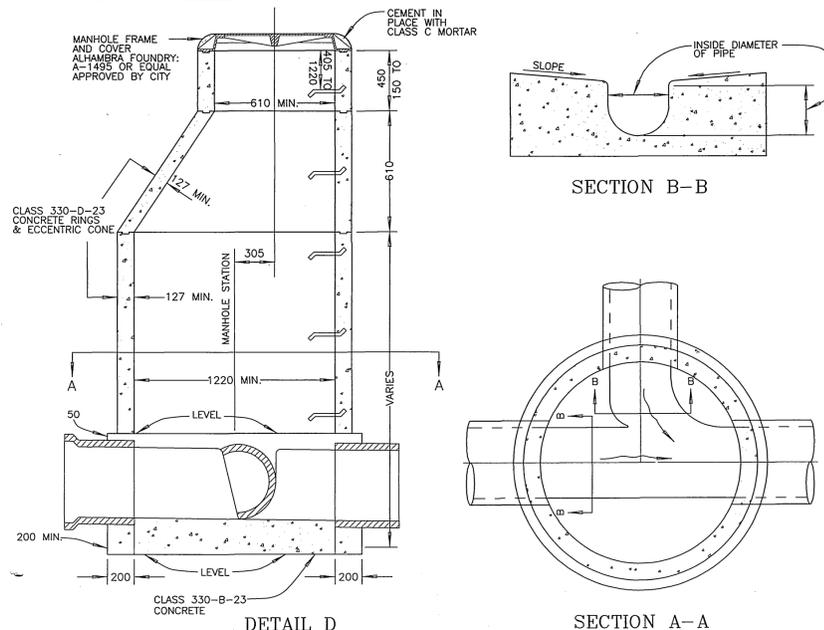
NOTES FOR DETAIL A

- ALL DIMENSIONS ARE IN MILLIMETERS.
- BACKFILL REQUIREMENTS SHALL BE AS SPECIFIED IN SECTION 308 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". WHERE NO SURFACE IMPROVEMENTS EXIST, THE TOP OF BACKFILL SHALL BE FLUSH WITH THE EXISTING SURFACE AND THE 90% RELATIVE COMPACTION SHALL EXTEND TO THE SURFACE.
- REPLACEMENT OF SURFACE IMPROVEMENTS SHALL BE AS SPECIFIED IN SECTION 306-1.5 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
- ALL SURFACE IMPROVEMENTS DAMAGED OR REMOVED BY THE CONTRACTOR'S OPERATION'S SHALL BE REPLACED UNLESS OTHERWISE SPECIFIED ON THE PLAN OR IN THE SPECIAL PROVISIONS. DAMAGED A.C. PAVEMENT SHALL BE OVERLAYED WITH 20 mm THICK A.C.
- ASPHALT CONCRETE USED FOR PERMANENT RESURFACING SHALL BE CLASS C2-AR-4000. AGGREGATE BASE SHALL BE THE SAME TYPE AS EXISTING BASE.
- ALL REQUIREMENTS OF THIS DRAWING APPLY TO TRENCHED IN EASEMENTS, AND RIGHTS OF ENTRY, AS WELL AS THOSE WITHIN STREET RIGHT OF WAY.



DETAIL A - TRENCH BACKFILL

PERMANENT RESURFACING DETAILS

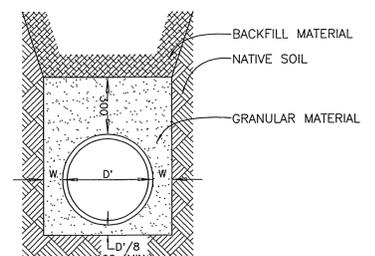


DETAIL D

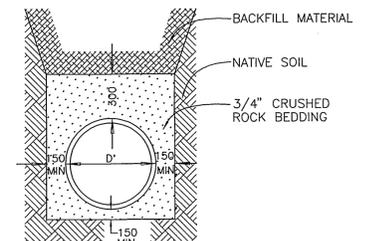
SECTION A-A

NOTES FOR DETAIL D

- ALL DIMENSIONS ON DRAWING ARE IN MILLIMETERS.
- ALL JOINTS SHALL BE SET IN CLASS C PORTLAND CEMENT MORTAR AND SHALL BE SACK FINISHED.
- RINGS AND CONES SHALL BE REINFORCED WITH 13 mm ROUND STEEL WOUND SPIRALLY ON 100 mm CENTERS.
- VERTICAL WALL OF CONE SHALL BE ON DOWNSTREAM SIDE OF MANHOLE.
- STEPS SHALL BE 356 mm WIDE STIRRUP TYPE SAFETY STEPS. THE STEPS OR SOCKETS SHALL BE CAST IN PLACE AT TIME OF MANUFACTURE. STEPS SHALL BE SPACED A MAXIMUM OF 405 mm C.C. MATERIAL FOR STEPS SHALL BE 13 mm GRADE 60 STEEL REINFORCING ROD COATED WITH POLYPROPYLENE, ASTM D-4101, OR CITY APPROVED EQUAL.
- BOTTOM PORTION OF MANHOLE SHALL BE 1220 mm INSIDE DIAMETER UNLESS OTHERWISE INDICATED ON PLAN. FOR DIAMETERS LARGER THAN 1220 mm, THE TOP OPENING SHALL HAVE A 915 mm DIAMETER FRAME AND COVER (ALHAMBRA FOUNDRY: A-1251-6 OR EQUAL APPROVED BY CITY). A 305 mm MINIMUM SHELF SHALL BE MAINTAINED.
- WHEN MANHOLE IS IN STREET TO BE PAVED, MANHOLE FRAME SHALL BE SET AFTER ADJACENT PAVEMENT HAS BEEN PLACED. TOP SHALL BE FLUSH WITH PAVEMENT.
- FIRST PIPE JOINT SHALL BE NO MORE THAN 305 mm FROM MANHOLE.
- AT THE CONTRACTOR'S OPTION, THICKNESS OF MANHOLE WALL MAY BE 105 mm PROVIDED CLASS 330-D-28 CONCRETE IS USED.
- COVER SHALL HAVE LETTER S IN CENTER.



CASE I



CASE III

DETAIL B - CASE I & III PIPE BEDDING

ENGINEER IN RESPONSIBLE CHARGE
 Richard D. McGrath
 RICHARD D. McGRATH
 R.C.E. No. 31952 Expires 12/31/2000
 DATE 11-19-97

REVISOR: P.H./ABE
 DESIGNED BY: P.H./ABE
 DRAWN BY: P.H./ABE
 CHECKED BY:

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY: R.M. Shultz
 PUBLIC WORKS DIRECTOR
 DATE 11/19/97

ARLINGTON AVENUE
 SEWER REALIGNMENT
 BETWEEN INDIANA AVE. AND McMAHON ST.

ACCOUNT NUMBER
 432-541500-440302-30268

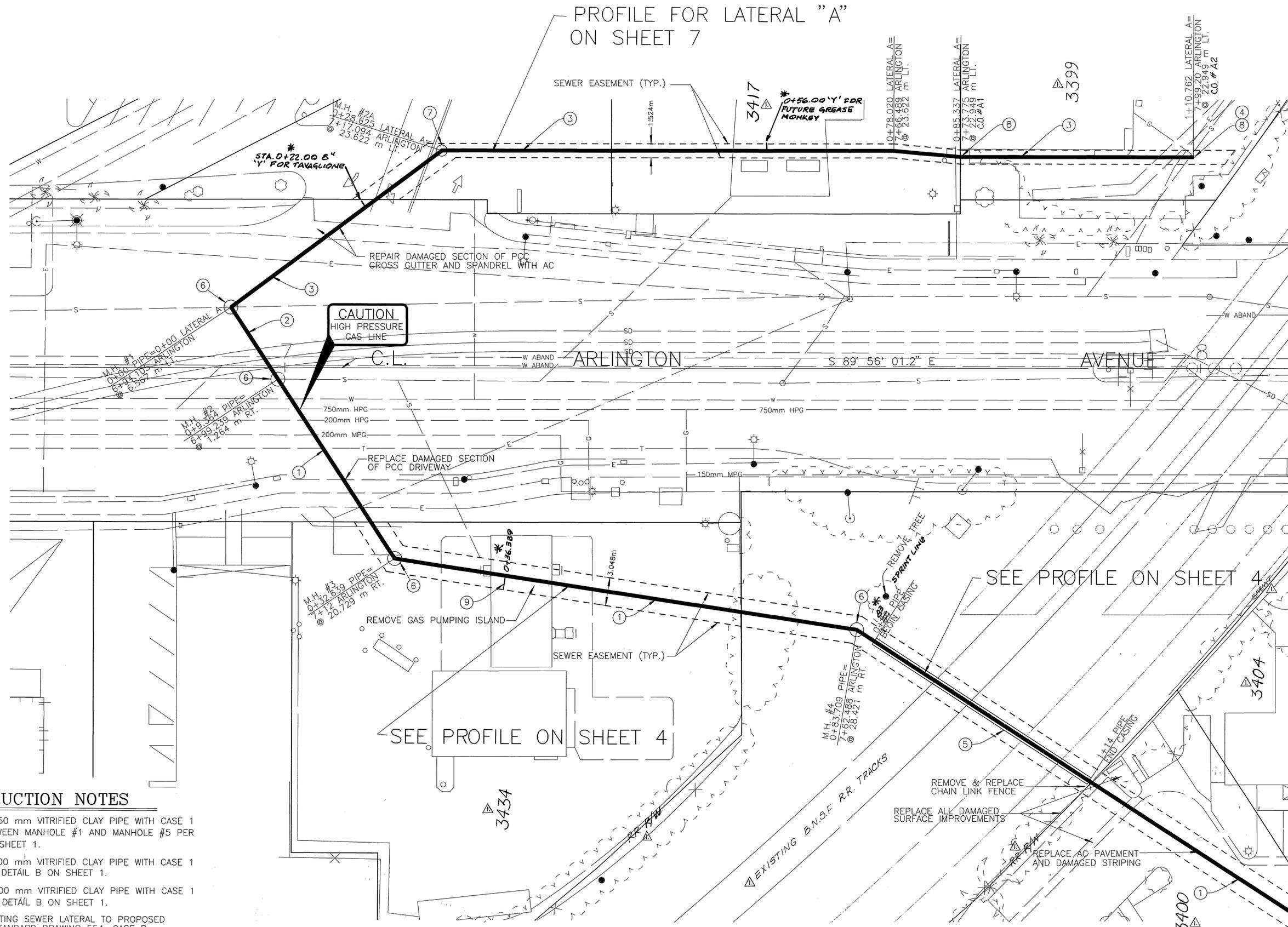
INDEXED 5/98 CCD

S-1681

SHEET 1 OF 7



PROFILE FOR LATERAL "A"
ON SHEET 7



CAUTION
HIGH PRESSURE
GAS LINE

CONSTRUCTION NOTES

- ① CONSTRUCT 450 mm VITRIFIED CLAY PIPE WITH CASE 1 BEDDING BETWEEN MANHOLE #1 AND MANHOLE #5 PER DETAIL B ON SHEET 1.
- ② CONSTRUCT 300 mm VITRIFIED CLAY PIPE WITH CASE 1 BEDDING PER DETAIL B ON SHEET 1.
- ③ CONSTRUCT 200 mm VITRIFIED CLAY PIPE WITH CASE 1 BEDDING PER DETAIL B ON SHEET 1.
- ④ CONNECT EXISTING SEWER LATERAL TO PROPOSED SEWER PER STANDARD DRAWING 554, CASE R.
- ⑤ CONSTRUCT 1524 mm MANHOLE PER DETAIL D, SHEET 1.
- ⑥ CONSTRUCT CLEANOUT PER STANDARD DRAWING 560.
- ⑦ CONSTRUCT 100 mm SEWER LATERAL (STUB OUT) PER STANDARD DRAWING 562.
- ⑧ CONSTRUCT 450 mm VITRIFIED CLAY PIPE WITH CASE III BEDDING BETWEEN MANHOLE #5 AND MANHOLE #7 PER DETAIL B ON SHEET 1.
- ⑨ CONNECT PROPOSED 200mm VCP TO EXISTING MANHOLE.

SEE PROFILE ON SHEET 4

SEE PROFILE ON SHEET 4

MATCH LINE PIPE STATION 1+40.360 SEE SHEET 3

* AS-BUILT 10-03-03 4th

ENGINEER IN RESPONSIBLE CHARGE
R. Mc Grath
 RICHARD D. McGRATH
 R.C.E. No. 31952 Expires 12/31/2000
 DATE 11-19-97



DESIGNED BY	P.H./ABE	DRAWN BY	P.H./ABE	CHECKED BY	
APPROVED BY		DATE			
DEPUTY P.W. DIRECTOR					
PRINCIPAL ENGINEER					
STREET DIVISION					
TRAFFIC DIVISION					
SURVEYOR					

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY: **R. Mc Grath**
 PUBLIC WORKS DIRECTOR
 DATE: 11-19-97

ARLINGTON AVENUE
 SEWER REALIGNMENT
 BETWEEN INDIANA AVE. & McMAHON ST.

ACCOUNT NUMBER
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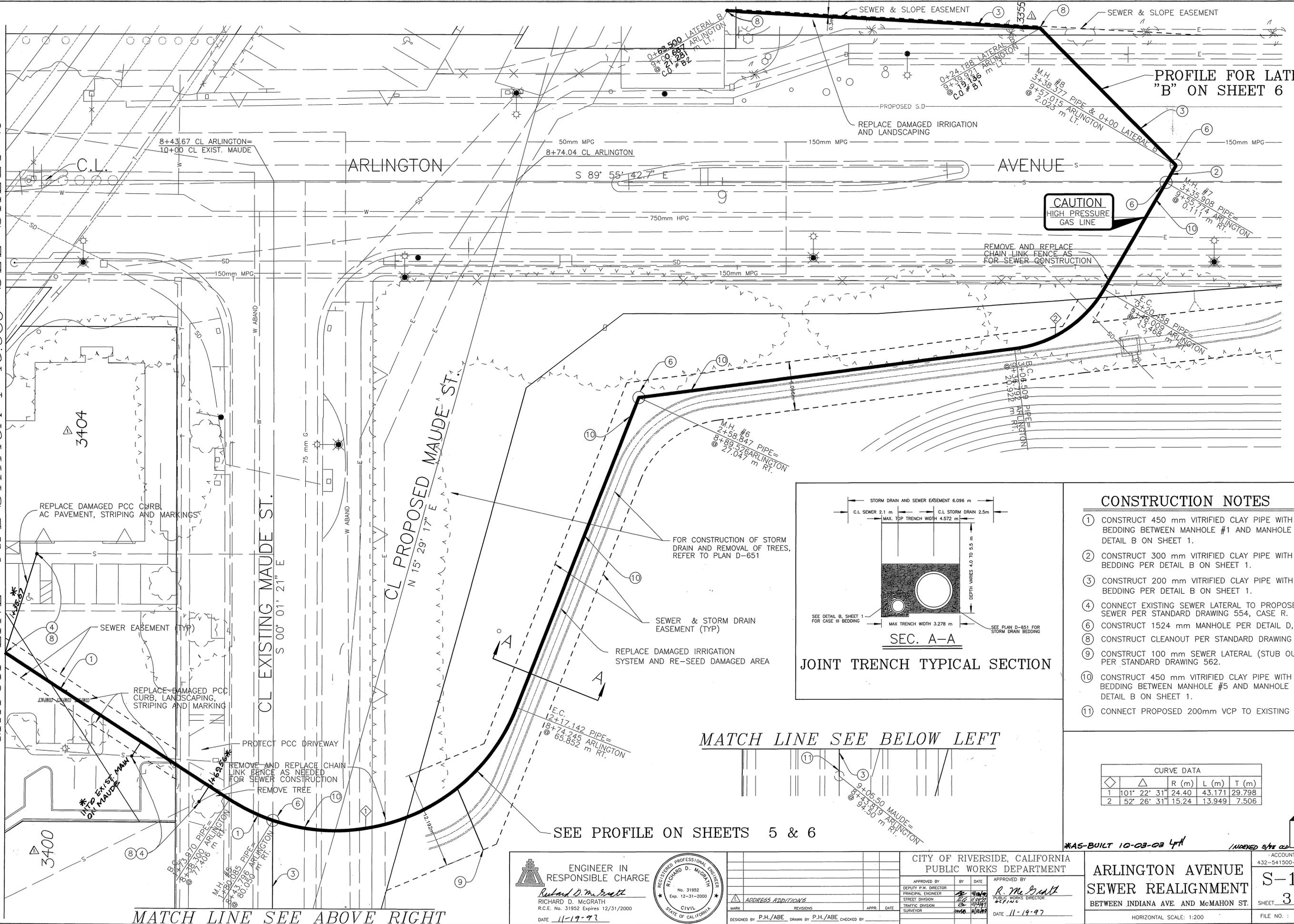
SHEET 2 OF 7

FILE NO. :

HORIZONTAL SCALE: 1:200

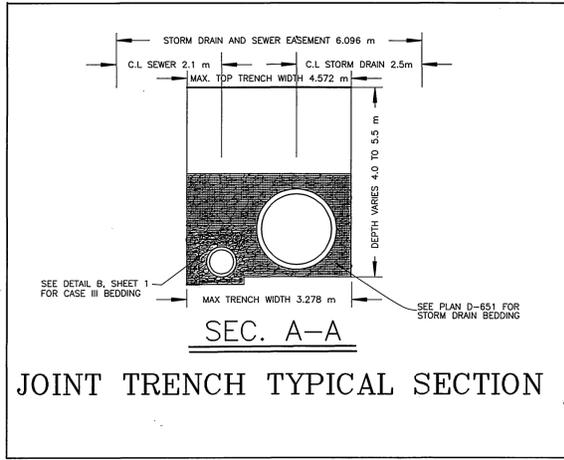


MATCH LINE PIPE STATION 1+40.360 SEE SHEET 2



PROFILE FOR LATERAL "B" ON SHEET 6

CAUTION
HIGH PRESSURE
GAS LINE



CONSTRUCTION NOTES

- ① CONSTRUCT 450 mm VITRIFIED CLAY PIPE WITH CASE 1 BEDDING BETWEEN MANHOLE #1 AND MANHOLE #5 PER DETAIL B ON SHEET 1.
- ② CONSTRUCT 300 mm VITRIFIED CLAY PIPE WITH CASE 1 BEDDING PER DETAIL B ON SHEET 1.
- ③ CONSTRUCT 200 mm VITRIFIED CLAY PIPE WITH CASE 1 BEDDING PER DETAIL B ON SHEET 1.
- ④ CONNECT EXISTING SEWER LATERAL TO PROPOSED SEWER PER STANDARD DRAWING 554, CASE R.
- ⑥ CONSTRUCT 1524 mm MANHOLE PER DETAIL D, SHEET 1.
- ⑧ CONSTRUCT CLEANOUT PER STANDARD DRAWING 560.
- ⑨ CONSTRUCT 100 mm SEWER LATERAL (STUB OUT) PER STANDARD DRAWING 562.
- ⑩ CONSTRUCT 450 mm VITRIFIED CLAY PIPE WITH CASE III BEDDING BETWEEN MANHOLE #5 AND MANHOLE #7 PER DETAIL B ON SHEET 1.
- ⑪ CONNECT PROPOSED 200mm VCP TO EXISTING MANHOLE.

CURVE DATA

	△	R (m)	L (m)	T (m)
1	101° 22' 31"	24.40	43.171	29.798
2	52° 26' 31"	15.24	13.949	7.506

MATCH LINE SEE BELOW LEFT

SEE PROFILE ON SHEETS 5 & 6

MATCH LINE SEE ABOVE RIGHT

ENGINEER IN RESPONSIBLE CHARGE
 Richard D. McGrath
 RICHARD D. McGRATH
 R.C.E. No. 31952 Expires 12/31/2000
 DATE 11-19-97



DESIGNED BY P.H./ABE, DRAWN BY P.H./ABE, CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 APPROVED BY: R. McGrath
 DEPUTY P.W. DIRECTOR
 DATE 11-19-97

ACCOUNT NUMBER 432-541500-440302-30268
ARLINGTON AVENUE SEWER REALIGNMENT
 BETWEEN INDIANA AVE. AND McMAHON ST.
 SHEET 3 OF 7
 FILE NO. :
 HORIZONTAL SCALE: 1:200

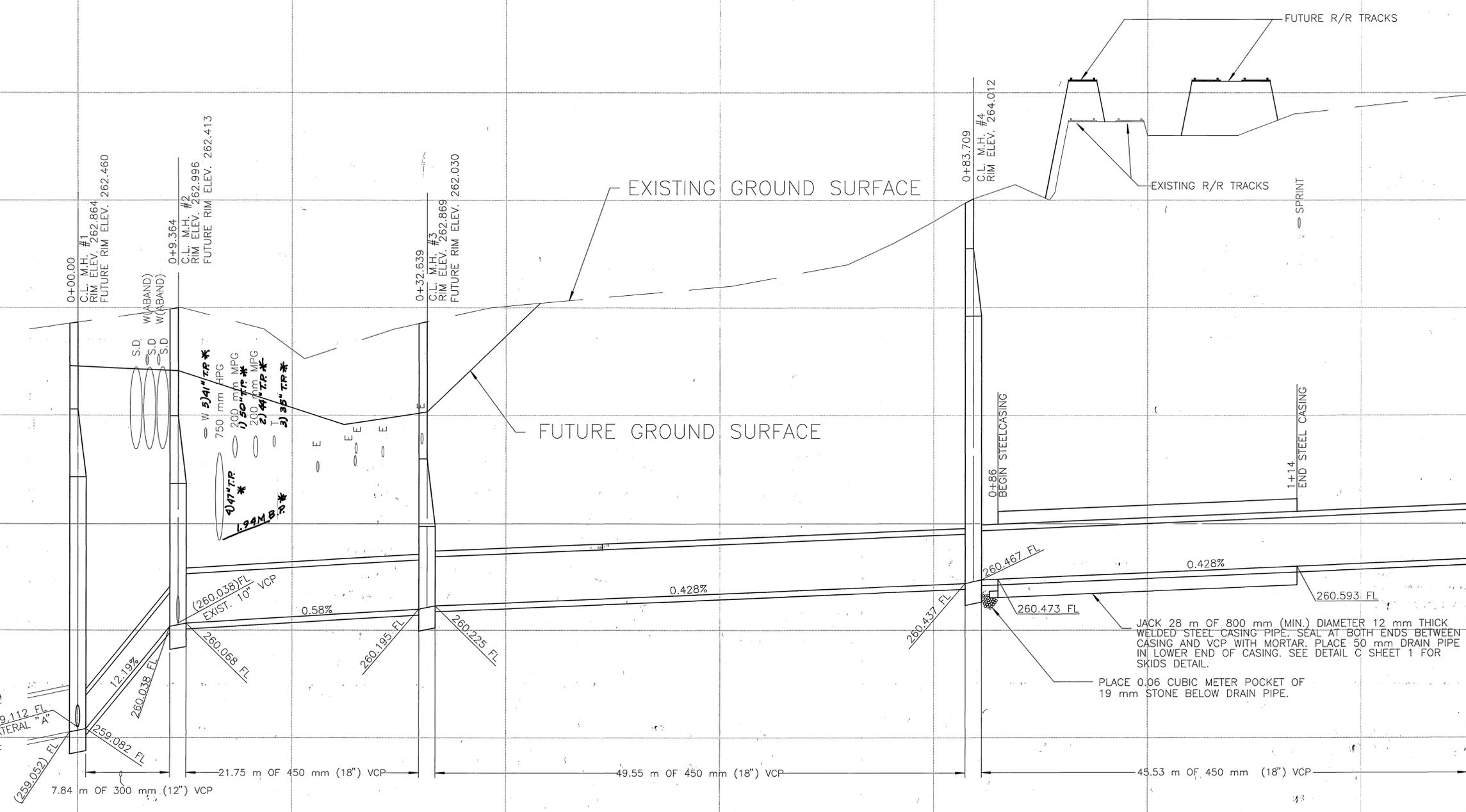


*AS-BUILT 10-03-03 L/H

INDEXED 5/18/02

265

260



SHEET 5

PIPE STATION 1+30

MATCH LINE

SEE PLAN ON SHEET 2

BENCHMARK
 P.K. NAIL AND CITY ENGINEER TAG IN THE SOUTHERLY CURB OF ARLINGTON AVENUE PERPENDICULAR TO THE CENTERLINE INTERSECTION OF ARLINGTON AVENUE AND INDIANA AVENUE.
 ELEVATION 262.352 METRIC (860.734 IMP.)

ENGINEER IN RESPONSIBLE CHARGE
 RICHARD D. McGRATH
 R.C.E. No. 31952 Expires 12/31/2000
 DATE 11-19-97



NO.	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
 PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
PRINCIPAL ENGINEER	<i>[Signature]</i>	11/19/97
STREET DIVISION	<i>[Signature]</i>	11/19/97
TRAFFIC DIVISION	<i>[Signature]</i>	11/19/97
SURVEYOR	<i>[Signature]</i>	11/19/97

PROFILE
 ARLINGTON AVENUE
 SEWER REALIGNMENT
 BETWEEN INDIANA AVE. AND McMAHON ST.

ACCOUNT NUMBER
 432-541500-440302-30268
 S-1681
 SHEET 4 OF 7
 FILE NO.:

* AS-BUILT 10-03-03 4H

INDEXED 5/98 ccd



HORIZONTAL SCALE: 1:200 VERTICAL SCALE: 1:20

DESIGNED BY P.H./ABE DRAWN BY P.H./ABE CHECKED BY

265

260

MATCH LINE PIPE STATION 1+30 SHEET 4

MATCH LINE STATION 2+90 SHEET 6

EXISTING GROUND SURFACE

FUTURE GROUND SURFACE

1+80.085
C.L. M.H. #5
RIM ELEV. 264.690
FUTURE RIM ELEV. 265.104

2+58.847
C.L. M.H. #6
RIM ELEV. 265.351

262.400 FL
EXIST 200 mm
VCP @ MAUDE

260.661 FL

0.428%

260.932 FL

0.428%

260.872 FL

260.802 FL

261.233 FL

0.60%

261.263 FL

261.445 FL

49.32 m OF 450 mm (18") VCP

77.24 m OF 450 mm (18") VCP

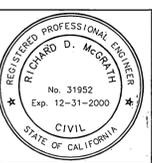
30.39 m OF 450 mm (18") VCP

SEE PLAN ON SHEET 3

2

BENCHMARK
 P.K. NAIL AND CITY ENGINEER TAG IN THE
 SOUTHERLY CURB OF ARLINGTON AVENUE
 PERPENDICULAR TO THE CENTERLINE INTERSECTION
 OF ARLINGTON AVENUE AND INDIANA AVENUE
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ENGINEER IN
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Richard D. McGrath
 RICHARD D. McGRATH
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MARK	REVISIONS	APPR	DATE
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CHECKED BY			

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 PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE	APPROVED BY
DEPUTY P.W. DIRECTOR			
PRINCIPAL ENGINEER	<i>R. McGrath</i>	11/19/97	<i>R. McGrath</i>
STREET DIVISION			
TRAFFIC DIVISION			
SURVEYOR			

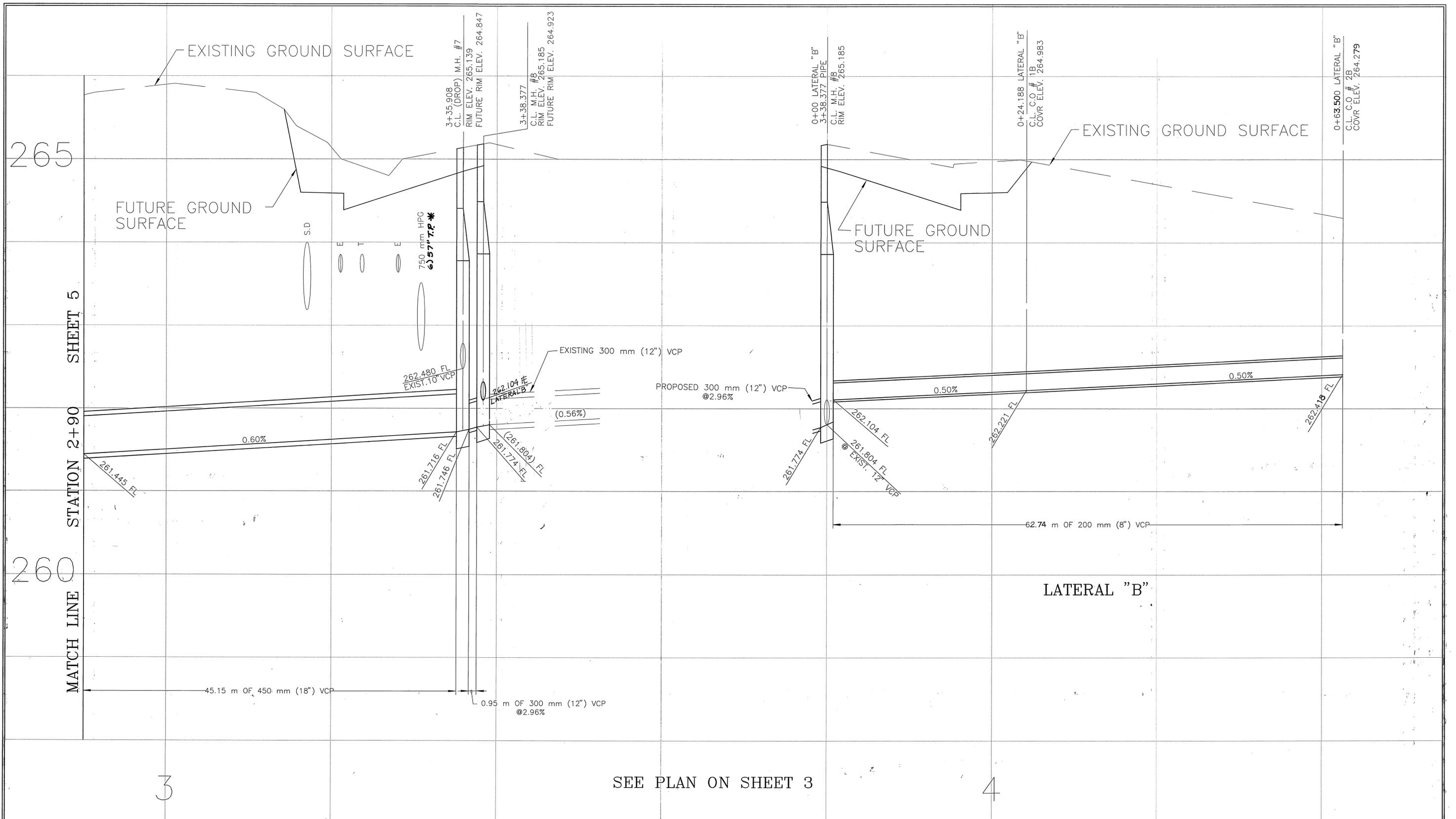
DATE 11-19-97

*AS-BUILT 10-03-03 LHM
 PROFILE
 ARLINGTON AVENUE
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 BETWEEN INDIANA AVE. AND McMAHON ST.

ACCOUNT NUMBER
 432-541500-440302-30268
 S-1681
 SHEET 5 OF 7
 FILE NO. :

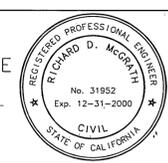
HORIZONTAL SCALE: 1:200 VERTICAL SCALE: 1:20





BENCHMARK
 P.K. NAIL AND CITY ENGINEER TAG IN THE
 SOUTHERLY CURB OF ARLINGTON AVENUE
 PERPENDICULAR TO THE CENTERLINE INTERSECTION
 OF ARLINGTON AVENUE AND INDIANA AVENUE
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PRINCIPAL ENGINEER	<i>[Signature]</i>	11-19-97
STREET DIVISION	<i>[Signature]</i>	11-19-97
TRAFFIC DIVISION	<i>[Signature]</i>	11-19-97
SURVEYOR	<i>[Signature]</i>	11-19-97

DESIGNED BY P.H/ABE DRAWN BY P.H/ABE CHECKED BY

*AS-BUILT 10-03-03 4th INDEXED 5/98 ocd

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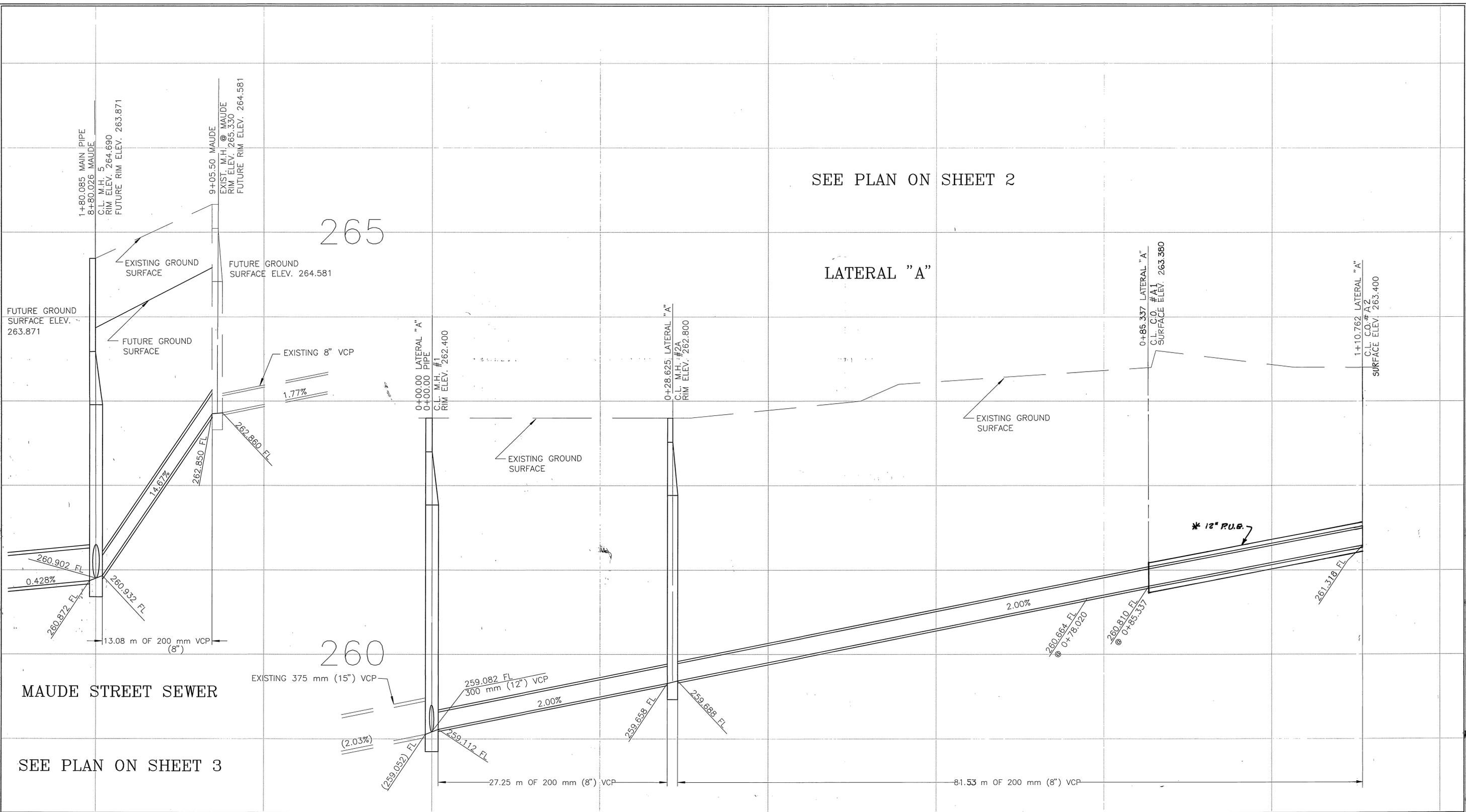
PROFILE ARLINGTON AVENUE SEWER REALIGNMENT BETWEEN INDIANA AVE. AND McMAHON ST.

S-1681 SHEET 6 OF 7

HORIZONTAL SCALE: 1:200 VERTICAL SCALE: 1:20

FILE NO.:





SEE PLAN ON SHEET 2

LATERAL "A"

265

260

MAUDE STREET SEWER

SEE PLAN ON SHEET 3

BENCHMARK
 P.K. NAIL AND CITY ENGINEER TAG IN THE
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APPROVED BY	BY	DATE	APPROVED BY
DEPUTY P.W. DIRECTOR			
PRINCIPAL ENGINEER	R. Mc McGrath	11-19-97	PUBLIC WORKS DIRECTOR
STREET DIVISION			
TRAFFIC DIVISION			
SURVEYOR			

DESIGNED BY P.H./ABE DRAWN BY P.H./ABE CHECKED BY

* AS-BUILT 10-03-03 LHM

PROFILE
 ARLINGTON AVENUE
 SEWER REALIGNMENT
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ACCOUNT NUMBER
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S-1681

SHEET 7 OF 7

HORIZONTAL SCALE: 1:200 VERTICAL SCALE: 1:20

FILE NO. :

